Application No. 09/310,024
Reply to Office Action of June 16, 2004

Amendments to the Claims

The following listing of the claims will replace all prior versions, and listings of the claims in the application:

Listing of Claims

1-8 canceled

9. (currently amended) A method of image transforming, comprising the steps of:

generating from an original image having a plurality of original picture elements, ~~a new picture element~~ a plurality of new picture elements, each of which being formed from neighboring picture elements selected from the plurality of original picture elements ~~that are neighboring~~, and forming a first transformation image by arranging the new picture ~~element~~ elements among the plurality of original picture elements;

dividing the original image into a plurality of first regions each having picture elements, ~~searching~~ scanning respective second regions each having picture elements ~~corresponding~~ similar to the picture elements in the first region, and forming a second transformation image by ~~transforming~~ replacing the picture elements in the first region ~~into~~ with the picture elements in the second region;

comparing values of respective picture elements in respective corresponding regions of the first transformation image and the second transformation image to obtain a difference of the values; and

on the basis of the ~~comparison result~~ difference, ~~deciding to output~~ outputting one or the other of the respective corresponding regions. ~~either the region in the first transformation image or the region in the second transformation image.~~

10. canceled

Application No. 09/310,024
Reply to Office Action of June 16, 2004

11. (currently amended) The image transforming method according to claim ~~10~~ 9, wherein, when the difference is bigger than a predetermined value, the picture element in the ~~second~~ first region is output. ~~transformed into the picture element in the first region.~~

12. (currently amended) The image transforming method according to claim ~~10~~ 9, wherein the difference is the level of high frequency components of the picture element.

13. (previously presented) The image transforming method according to claim 9, wherein, when a first region corresponds to plural second regions, a second region is decided whose each picture element value is obtained by calculating an average of plural corresponding picture element values in the plural second regions.

14. (previously presented) The image transforming method according to claim 9, wherein the original image is a color image.

15. (currently amended) An apparatus for image transforming, comprising:

an interpolator for generating from an original image having a plurality of original picture elements, ~~a new picture element~~ a plurality of new picture elements, each of which being formed from neighboring picture elements selected from the plurality of original picture elements ~~that are neighboring~~, and forming a first transformation image by arranging the new picture ~~element~~ elements among the plurality of original picture elements;

a fractal processor for dividing the original image into a plurality of first regions each having picture elements, ~~searching~~ scanning respective second regions each having picture elements ~~corresponding~~ similar to the picture elements in the first region, and forming a second transformation image by ~~transforming~~ replacing the picture elements in the first region ~~into~~ with the picture elements in the second region;

a fractal filter for comparing values of respective picture elements in respective corresponding regions of the first transformation image and the second transformation image to obtain a difference of the values; and

on the basis of the ~~comparison result~~ difference, ~~deciding to output~~ outputting one or the other of the respective corresponding regions. ~~either the region in the first transformation image or the region in the second transformation image.~~

16. canceled

17. (currently amended) The image transforming apparatus according to claim ~~16~~ 15, wherein, when the difference is bigger than a predetermined value, the picture element in the ~~second~~ first region is output. ~~transformed into the picture element in the first region.~~

18. (currently amended) The image transforming apparatus according to claim ~~16~~ 15, wherein the difference is the level of high frequency components of the picture element.

19. (previously presented) The image transforming apparatus according to claim 15, wherein, when a first region corresponds to plural second regions, a second region is decided whose each picture element value is obtained by calculating an average of plural corresponding picture element values in the plural second regions.

20. (previously presented) The image transforming apparatus according to claim 15, wherein the original image is a color image.

21. (previously presented) A method of image transforming using the apparatus of claim 15, wherein the values of the picture elements of the region in the first transformation image are compared with values of the picture elements of the corresponding region in the second transformation image.